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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WOZNIAK, JAMES S

ART UNIT PAPER NUMBER

2655

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,553

Applicant(s)

KAUFHOLZ, PAUL AUGUSTINUS
PETER

Examiner

James S. Wozniak

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In response to the office action from 4/27/2005, the applicant has submitted an amendment, filed 7/27/2005, amending claims 1-17, while arguing to traverse the art rejection based on the amended limitations (*Amendment, Pages 7-9*). Applicant's arguments have been fully considered, however the previous rejection is maintained, altered with respect to the amended claims and due to the reasons listed below in the response to arguments.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to the independent claims, the applicant argues that Finn et al (*U.S. Patent: 6,505,057*) fails to teach a plurality of separate devices including functionally separate speech recognizing and echo canceling facilities (*Amendment, Page 7*). In response, the examiner notes that Finn teaches multiple microphone devices, each having an acoustic echo canceller, wherein the canceller results are combined at an AEC summer (*Fig. 9A; Col. 16, Line 1- Col. 18, Line 6; Col. 8, Line 54- Col. 9, Line 19*). Although Finn fails to specifically suggest that each microphone input device has an associated speech recognition facility, Finn does suggest incorporating speech recognition means into the aforementioned echo cancellation system (*Col.*

3, *Lines 17-23*). The examiner points out that the Stammmler et al (*U.S. Patent: 6,839,670*) reference provides the specific concept of combining a speech recognizer with an echo canceling facility (*Col. 19, Lines 23-67; Col. 7, Lines 34-39*), which is not explicitly taught in the Finn reference, and also shows how a speech recognizer may be arranged in combination with an echo canceller at a microphone input device (*Fig. 2*). Thus, Finn teaches multiple microphone input devices each having an AEC, while Stammmler teaches the concept of combining a speech recognizer and an echo canceller at a microphone input, and when taken in combination, provide the teaching of multiple microphone input devices each having an echo canceller and a speech recognizer (as per the teachings of Stammmler- concept of a speech recognizer at a microphone input), as is required by the presently claimed invention. Therefore, it is the combination of Finn and Stammmler, and not merely the Finn reference, that teaches the aforementioned claim limitation.

In response to the applicant's arguments that Finn fails to teach a multi-device audio-video system (*Amendment, Page 7*), the examiner notes that it is Stammmler, and not Finn, which teaches such a multi-device A-V system (navigation system, radio, etc., *Col. 19, Lines 23-67*). Furthermore, in response to these arguments, the recitation "audio-video system" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's arguments against the references *individually* (*Finn, Amendment, Page 7, and Stammler, Page 8*), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the motivation for combining the prior art of record is not related to the "novel features of the present invention" (*Amendment, Page 9*), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (*Amendment, Pages 8-9*), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The dependent claims further limit rejected independent claims, and thus, also remain rejected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 5-8, and 12-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al (*U.S. Patent: 6,505,057*) in view of Stammler et al (*U.S. Patent: 6,839,670*).

With respect to **Claims 1 and 8**, Finn discloses:

In the presence of a plurality of devices each including functionally separate speech recognizing facilities and echo canceling facilities, driving the echo canceling facilities to combine their forces by one or more thereof for canceling one or more mutually unique cancelable speech entities and combining such cancelled entities for overall non-recognition by the system (*Col. 16, Line 1- Col. 18, Line 6, and Fig. 9A and suggested system use with voice recognition, Col. 3, Lines 17-23*).

Although Finn suggests system use with a voice recognition system, the system is not explicitly disclosed, however such systems utilizing echo compensation are well known in the art as is evidenced by Stammler (speech control system, Col. 19, Lines 23-67; echo subtraction, Col. 7, Lines 34-39).

Finn and Stammler are analogous art because they are from a similar field of endeavor in voice processing systems utilizing echo compensation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Finn with a

specific speech recognition system as taught by Stammler in order to implement a specific system for convenient, hands-free device control using speech (Stammler, Col. 2, Lines 19-24) capable of canceling echoes at each microphone input as taught by Finn to produce high quality speech for recognition.

With respect to **Claims 5 and 12**, Stammler further shows:

Combining operates by centralizing the echo canceling facilities and feeding various speech recognizing facilities in a distributed manner (*system having an echo compensator and two speech recognition means, Fig. 2*).

With respect to **Claims 6 and 13**, Stammler additionally shows:

The combining operates by centralizing the echo canceling facilities and speech recognizing facilities in a joint control facility (*system having speech recognizers and echo compensation means, Fig. 2*).

With respect to **Claims 7 and 14**, Stammler shows:

The combining operates by arranging selected echo canceling facilities in a centralized control device and feeding selected speech recognizing facilities in parallel (*Fig. 2*).

With respect to **Claim 15**, Finn teaches multiple connected echo canceling facilities between multiple speech inputs and outputs, while Stammler teaches a microphone and speaker between speech recognition and echo cancellation facilities, as applied to Claims 1 and 8.

With respect to **Claim 16**, Stammler teaches speech dialog interruption means (*Col. 13, Lines 22-45*).

With respect to **Claim 17**, Stammler teaches the operation of a speech recognition system and device control utilizing a microphone (*Col. 19, Lines 23-67*).

5. **Claims 2-4 and 9-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al in view of Stammler et al, and further in view of Knittle et al (*U.S. Patent: 5,761,638*).

With respect to **Claims 2 and 9**, Finn in view of Stammler teaches the echo cancellation and speech recognizing facilities, as applied to Claim 1. Finn in view of Stammler do not specifically disclose an embodiment in which the echo cancellers are arranged in series, however Knittle teaches such an arrangement (*Col. 10, Lines 4-25*).

Finn, Stammler, and Knittle are analogous art because they are from a similar field of endeavor in voice processing systems utilizing echo compensation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Finn in view of Stammler with the series arrangement of echo cancellers as taught by Knittle in order to further improve echo cancellation by arranging echo cancellers in series to cancel both near and far field echo (*Knittle, Col. 10, Lines 4-25*).

With respect to **Claims 3 and 10**, Knittle additionally discloses:

The series arrangement feeds the speech recognizing facility in a centralized manner (*Col. 10, Lines 4-25, and Fig. 1*).

With respect to **Claims 4 and 11**, Knittle teaches the series arrangement of echo cancellers, while Stammler teaches feeding the echo cancelled speech signal to multiple speech recognizers as applied to Claims 5 and 12.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
1/18/2006



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER